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AMSAT NEWS SERVICE
ANS-270

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

In this edition:

* Fox-1A to Launch on NROL-55 October 8
* Recording of LilacSat-2's FM Transponder
* Be the first to catch the signals from AAUSAT-5 contest
* LAPAN-A2 To Be Launched September 28
* ARISS-Europe Chairman Retires, Successor Elected
* Space Auction to be held again at this year’s AMSAT Symposium
* AMSAT Space Symposium Paper Publication Deadline Looms
* Fox Telemetry Decoder Software Version 1.0 Available for Download
* ARISS-US Contact Proposals for Schools, Educational Organizations
  Still Being Accepted
* ARISS News
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-270
ANS-270 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 270
>From AMSAT HQ KENSINGTON, MD.
September 27, 2015
To All RADIO AMATEURS
BID: $ANS-270

Fox-1A to Launch on NROL-55 October 8

NROL-55 is scheduled to launch on October 8, 2015 from Vandenberg Air Force Base, California.

NROL-55 will carry an auxiliary payload called Government Rideshare Advanced Concepts Experiment (GRACE).

GRACE, sponsored by the NRO, will carry 13 CubeSats to space, nine sponsored by the NRO and four sponsored by NASA. GRACE is the fourth NRO-sponsored CubeSat mission. Fox-1A is one of the NASA sponsored CubeSats.

[ANS thanks NRO/OCPA/OPA]

Recording of LilacSat-2's FM Transponder

Several stations were heard making contacts on LilacSat-2's FM transponder at 2300 UTC today, 26 September on orbit #104 over North America.

Clayton W5PFG uploaded a recording to Soundcloud:

https://soundcloud.com/w5pfg/lilacsat-2-26092015-2300-ko4ma-ka4h-ki4ro-aa5pk-kc4le-w5pfg

(Editor's note the URL above is truncated to meet ANS' editorial requirements. You may need to copy and paste as one line to guarantee it works)

[ANS thanks Clayton W5PFG for the above information]

Be the first to catch the signals from AAUSAT-5 contest

Be the first to send in your recorded signal from AAUSAT5 and you will receive a prize from ESA's Education Office.

Launched on 19 August to the ISS, the Danish student CubeSat is now waiting for its deployment from the Japanese Kibo module’s airlock. Sometime in the week of 5 October, an astronaut will manipulate a robotic arm to lift AAUSAT5 from the airlock and place it in orbit.

Once launched from the International Space Station the CubeSat will begin transmitting signals to Earth that can be picked up by anyone with common amateur radio equipment. ESA challenges anyone to record the signal and send it to us (cubesats(a)esa.int) and Aalborg University (studentspace(a)space.aau.dk).

The first correct email received will win the following prices:

ESA/AAUSAT5 poster with signatures of the team members
ESA Education goodie bag
Scale 1:1 3D printed model of the AAUSAT 5 satellite
AAUSAT5 is the 5th CubeSat designed and built by the University of Aalborg, Denmark. It is the 2nd AAUSAT satellite tested under ESA’s supervision as part of the ESA Education Office’s Fly Your Satellite programme.

The technical objective of AAUSAT5 is to test an improved version of an Automatic Identification System (AIS), which aims to track and identify ships transiting away from coastal areas and those in remote areas.

If successful, a satellite-based AIS system could enable the establishment and use of safe new shipping lanes.

For more information please see the ESA AAUSAT5 website
http://www.esa.int/Education/CubeSats_-_Fly_Your_Satellite/AAUSAT5_CubeSat
and the team site from the University of Aalborg.
http://www.space.aau.dk/aausat5/

[ANS thanks ESA for the above information]

LAPAN-A2 To Be Launched September 28

LAPAN-A2 satellite will be launched together on a mission astrosat India's PSLV-C30 / astrosat on 28 Sep 2015. It will operate in the near equatorial orbit between 6 to 8 degree, 650km and able to cross the territory of Indonesia 14 times a day.

LAPAN A2, also known as LAPAN-ORARI, is an indonesian microsatellite based on the LAPAN-Tubsat. It carries an AIS (Automatic Identification System) to identify the ships in the waters of Indonesia and a video camera with a range three times wider than the Lapan-Tubsat. It also carries a payload for disaster management by amateur radio communication.

The satellite structure and many subsystems are the same as in its sister satellite LAPAN A3.

The Earth observation payload of LAPAN A2 consists of a Video camera (Kappa PAL) for 80 km width ground coverage and a Video camera (Kappa HDTV for high resolution satellite color video observation with a ground resolution of 6 m and a ground coverage of 11 × 6 km per video frame.

LAPAN-A2 carries a payload of voice repeaters and an APRS Repeater for communications of the Organisation for Amateur Radio Indonesia (ORARI) during a disaster.

[ANS thanks Wisnu YBØAZ and Gunter's Space Page for the above information]

ARISS-Europe Chairman Retires, Successor Elected

Amateur Radio on the International Space Station-Europe (ARISS-EU http://www.ariss-eu.org/) Chairman Gaston Bertels, ON4WF, will retire from that post this fall after serving since 2000, when the ARISS Working Group was formed. Among other initiatives, Bertels was involved in the project to have Amateur Radio equipment and antennas installed on the ISS Columbus module and with the installation and commissioning of the Ham TV DATV system on the ISS. He has also personally assisted in many ARISS contacts involving schools and groups on the Continent.

"[I'm] now 88 and slowing down a bit," Bertels told ARRL in announcing the election of his successor as ARISS-EU Chairman, Emanuele D'Andria, I0ELE.

In 2014, International Amateur Radio Union Region 1 (IARU-R1 http://www.iaru-r1.org) awarded the Roy Stevens, G2BVN, Memorial Trophy to Bertels, in recognition of his service to Amateur Radio in space, first as chairman of the Eurocom Working Group and then of the Amateur Radio Space Exploration Working Group.

As Bertels explained, a slate of four ARISS-EU Board candidates was

presented to the ARISS-EU member societies. All ran unopposed for 2-year terms. In addition to D'Andria, other Board members include Oliver Amend, DG6BCE, technical director; Bertus HÃ¼sken, PE1KEH, counselor, and Jean Pierre Courjaud, F6DZP, counselor. The new ARISS-EU Board takes office on October 1.

The ARISS membership includes the AMSAT organizations in Belgium, France, Italy, Sweden, and the UK, and the IARU member societies in Italy, Germany, Poland, France, Portugal, Belgium, Switzerland, the Netherlands, and the UK. IARU member societies in Malta and Lebanon are associate members.

"Congratulations to the elected Board, and best wishes for a very successful term of office," Bertels said in announcing the new board.

[ANS thanks The ARRL Letter for the above information]

Space Auction to be held again at this year’s AMSAT Symposium

In light of the very successful—and fun—auction at last year’s AMSAT Symposium, AMSAT-NA is pleased to announce that you can look forward to another auction at this year’s Symposium. The auction will be held at the Friday night reception. Drew Glasbrenner, KO4MA, has again volunteered to be the Auctioneer.

To date, we have several space-related items for the auction. However, to make this auction, interesting, fun, and “profitable”** we could use many more items. Some of the items auctioned last year included several astronaut autographed items, including a DVD from Richard Garriott, Russian memorabilia, spacecraft and rocket models, space related books, the sign from the AMSAT Lab and items from previous AMSAT satellites.

If you have any space or AMSAT related items you would like to donate for the auction, please contact Frank Bauer, KA3HDO, at ka3hdo(a)amsat.org. Think about this and use your creativity as this is for a good cause. We thank you for your donations in advance!

**And don’t forget that AMSAT is a 501 (c) (3) non-profit organization. So your auction donations are tax deductible!!

[ANS thanks Frank KA3HDO for the above information]

AMSAT Space Symposium Paper Publication Deadline Looms

AMSAT Space Symposium Proceedings Chairman, Dan Shultz, N8FGV, reminds all that the final deadline for receiving Papers for publication in the AMSAT Symposium Proceedings is

MONDAY SEPTEMBER 28.

Final drafts should be submitted to Dan, n8fgv (at) usa (dot) net.

Dan advises that authors who are pushing hard to meet this deadline should contact him immediately. n8fgv (at) usa (dot) net.

These papers will be presented at the AMSAT Space Symposium to be held on the weekend of October 16-18, 2015, at the Crown Plaza Hotel, Dayton, Ohio.

[ANS thanks Dan N8FGV for the above information]

Fox Telemetry Decoder Software Version 1.0 Available for Download

Version 1.0 of the FoxTelem software, the Fox Telemetry Decoder is being released to enable setup, testing, and debugging of your Fox-1A ground station prior to the launch of the satellite. FoxTelem is used to demodulate, store and analyze telemetry data from AMSAT's Fox series of Cube Sats.

Fox-1 satellites include two telemetry formats:

+ Slow Speed, also called Data Under Voice (DUV) is 200 bps FSK data sent at the same time as the transponder audio. Whenever the transmitter is on, data is being sent. This happens during beacons and during live QSOs.

+ High Speed is 9600 bps FSK sent instead of the transponder. This is used for data intensive experiments such as the Virginia Tech Camera.
  This is only active when commanded from the ground. You can recognize High Speed because it sounds like an old school computer modem.

FoxTelem will receive and store both formats assuming you can feed it audio that does not have the frequencies below 200 Hz filtered. For High Speed, the audio must also extend to include the full 9600bps bandwidth of the FM signal. For both modes this is best achieved from a Software Defined Radio or from the 9600 bps packet port of some radios. The FoxTelem User Guide provides more details.

FoxTelem is supplied as an archive file (.zip on windows, .dmg file on MacOs, .gzip on Linux). Links for downloading can be found at:
http://www.amsat.org/?page_id=4532
You can unzip the contents and put it in the directory of your choice. Also,
detailed in the User Guide, are instructions to select the sound source and
set received audio levels on your computer.

Until Fox-1A is launched you can confirm everything is working by testing with test wav file which will be available from:
http://amsat.us/FoxTelem/recordings . Access to the test file is accomplished by selecting "Load Wav File" from the FoxTelem File menu, then navigate to the directory where you saved the test wav file. Once you press the start button the file will play through the decoder.

The FoxTelem page can also be accessed from the main AMSAT web page:
http://www.amsat.org --> Fox Project --> FoxTelem Software for Windows, Mac, & Linux.
The direct link to the page is: http://www.amsat.org/?page_id=4532

[ANS thanks the FoxTelem software team for the above information]

ARISS-US Contact Proposals for Schools, Educational Organizations
Still Being Accepted

Message to US Educators
Amateur Radio on the International Space Station
Contact Opportunity
Call for Proposals
Proposal Window September 1 – November 1, 2015

The Amateur Radio on the International Space Station (ARISS) Program is seeking formal and informal education institutions and organizations, individually or working together, to host an Amateur Radio contact with a crew member on board the ISS. ARISS anticipates that the contact would be held between July 1 and December 31, 2016. Crew scheduling and ISS orbits will determine the exact contact dates. To maximize these radio contact opportunities, ARISS is looking for organizations that will draw large numbers of participants and integrate the contact into a well-developed education plan.

The deadline to submit a proposal is November 1, 2015. Proposal information and documents can be found at www.arrl.org/hosting-an-ariss-contact.

Informational Sessions
To help organizations in preparing their proposals, the ARISS Program Coordinator will offer hour-long online information sessions. These are designed to provide more information regarding US ARISS contacts and the proposal process and offer an opportunity to ask questions. While attending an online information session is not required, it is strongly encouraged.

The next and last of these will be offered Wednesday, September 30, at 2300 UTC.

Advance registration is necessary. E-mail ARISS (ariss(a)arrl.org) to sign up for an information session.

The Opportunity
Crew members aboard the International Space Station will participate in scheduled Amateur Radio contacts. These radio contacts are approximately 10 minutes in length and allow students and educators to interact with the astronauts through a question-and-answer session.

An ARISS contact is a voice-only communication opportunity via Amateur Radio between astronauts and cosmonauts aboard the space station and classrooms and communities. ARISS contacts afford education audiences the opportunity to learn firsthand from astronauts what it is like to live and work in space and to learn about space research conducted on the ISS. Students also will have an opportunity to learn about satellite communication, wireless technology, and radio science. Because of the nature of human spaceflight and the complexity of scheduling activities aboard the ISS, organizations must demonstrate flexibility to accommodate changes in contact dates and times.

Amateur Radio organizations around the world, NASA, and space agencies in Russia, Canada, Japan and Europe sponsor this educational opportunity by providing the equipment and operational support to enable direct communication between crew on the ISS and students around the world via Amateur Radio. In the US, the program is managed

by AMSAT (Radio Amateur Satellite Corporation) and ARRL (American Radio Relay League) in partnership with NASA.

More Information
Interested parties can find more information about the program at www.ariss.org and www.arrl.org/ARISS.

For proposal information and more details such as expectations, proposal guidelines and proposal form, and dates and times of Information Sessions go to http://www.arrl.org/hosting-an-ariss-contact. Please direct any questions to ariss(a)arrl.org

[ANS thanks ARISS for the above information]

ARISS News

Upcoming ARISS Contact Schedule as of 2015-09-24 05:00 UTC

Quick list of scheduled contacts and events:

Nowogard Union Schools: Junior High School No. 2, Nowogard, Poland, telebridge via LU1CGB
The ISS callsign is presently scheduled to be NA1SS
The scheduled astronaut is Kjell Lindgren KO5MOS
Contact is a go for: Tue 2015-09-29 12:56:27 UTC 36 deg
Watch for possible live stream http://ariss.pzk.org.pl/live/

Fukara Junior High School, Susono, Japan, direct via 8N2F
The ISS callsign is presently scheduled to be NA1SS
The scheduled astronaut is Kimiya Yui KG5BPH
Contact is a go for: Thu 2015-10-01 10:26:55 UTC 85 deg

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Interested in hosting an ARISS contact?

The window is now open from 2015-09-01 to 2015-11-01. These proposals will be for school contacts during the second half of 2016.
Go to http://www.arrl.org/hosting-an-ariss-contact or http://www.ariss.org/apply-to-host-an-ariss-contact.html for full details.

To help organizations in preparing their proposals, the ARISS Program Coordinator will offer hour-long online information sessions. These are designed to provide more information regarding US ARISS contacts and the proposal process and offer an opportunity to ask questions. While attending an online information session is not required, it is strongly encouraged.

One last session will be offered Wednesday, September 30, at 2300 UTC. Advance registration is necessary. Email ARISS (ariss(a)arrl.org) to sign up for an information session.

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>From 2015-12-20 to 2016-01-04, there will be no US Operational Segment (USOS) hams on board ISS. So any schools contacts during this period will be conducted by the ARISS Russia team.

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ARISS is always glad to receive listener reports for the above
contacts. ARISS thanks everyone in advance for their assistance.
Feel free to send your reports to aj9n(a)amsat.org or aj9n(a)aol.com.

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Check out the Zoho reports of the ARISS contacts

https://reports.zoho.com/ZDBDataSheetView.cc?DBID=412218000000020415

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Exp. 43/44 on orbit
Scott Kelly
Mikhail Kornienko RN3BF

Exp. 44 on orbit
Oleg Kononenko RN3DX
Kimiya Yui KG5BPH
Kjell Lindgren KO5MOS

Exp. 45 on orbit
Sergey Volkov RU3DIS

[ANS thanks ARISS, Charlie AJ9N and David AA4KN for the above
information]

Satellite Shorts From All Over

+ Satellite Activation on Argentina's Martin Garcia Island

  Members of the Radio Club Argentino will activate the special
  callsign LU4AA/D from the Argentine exclave Martin Garcia Island
  (ILLW AR 022, WW Loc. GF05VT) in Uruguayan waters (part of the La
  Plata in Buenos Aires Province) between/around 2000z, October 1st
  and 1400z, October 4th. Operators mentioned are Francisco/ LU1AET,
  Martin/LU1AMH, Fernando/LU1ARG, Carlos LU1BCE, Fernando LU2BPM,
  Nico/LW3DN and Juan/LU8ARI. Activity will be on 80-1 meters, as
  well as 6m/2m/70cm, and using CW, SSB, Satellites, SSTV and the
  Digital modes. QSL by the Bureau or via LU4AA direct.

  PLEASE NOTE: The trip, originally planned for middle August had to
  be rescheduled as a strong storm caused a heavy flooding and closed
  the departure port.

  [ANS thanks the Ohio/Penn DX Bulletin No. 1233 for the above
   information]

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In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining
donors to AMSAT Project Funds, will be eligible to receive addi-

tional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
EMike McCardel, KC8YLD
kc8yld at amsat dot org